



## EXECUTIVE SUMMARY

A high-speed train system is the logical next step in the development of California's transportation infrastructure.

Based on the best data available, a high-speed train system will return twice as many benefits to the state's citizens as it costs. In 20 years, the system is projected to carry 32 million intercity passengers annually, transport another 10 million commuters, generate nearly \$900 million in revenues, and return a surplus to the state of more than \$300 million.

Moreover, research indicates nearly two-thirds of Californians already endorse building a high-speed train system and would be willing to pay for its construction.

### Legislative Mandate

The California High-Speed Rail Authority was created by the state Legislature in 1996 to develop a plan for the construction, operation and financing of a statewide, intercity high-speed passenger rail system.\*

The Authority consists of nine members — five appointed by the Governor, two by the Senate Rules Committee, and two by the Speaker of the Assembly.

### The Plan

With the assistance of the nation's best consultants in engineering, ridership forecasting, transportation economics and financing — as well as engineers and manufacturers of high-speed train systems around the world — the Authority has developed a plan to make high-speed train travel a reality in California.

The plan describes a 700-mile-long high-speed train system capable of speeds in excess of 200 miles per hour on dedicated, fully-grade separated tracks with state-of-the-art safety, signaling and automated train control systems. The system would serve the major metropolitan centers of California in 2020.

To meet its legislative mandate, the Authority also describes a vision of how this system would operate. The analytical work for this plan represents the most comprehensive review of statewide intercity travel yet undertaken. When considered in conjunction with the 20-year plans of the state's municipal planning organizations, it provides a detailed picture of the state's future transportation needs.

\* Chapter 796 of the Statutes of 1996; SB 1420 Kopp and Costa.

This business plan does not suggest that a high-speed train system should be built in a vacuum and at the exclusion of meeting other important transportation needs over the next two decades. Instead, the business plan offers a way to approach the intercity travel needs of nearly 50 million Californians, which will only succeed to the extent that the state's freeways, airports and conventional rail systems are also enhanced. The existing transportation infrastructure will be more efficient and productive with high-speed trains, which will rely on the freeway, highway, urban transit, and conventional rail networks for access.

Other agencies at the federal, state, and local levels are preparing plans and programs to improve the existing transportation infrastructure. The focus of this business plan is on how to implement a high-speed train system that will work with other improvements to meet the mobility needs of California in the new century.

An investment in a high-speed train system should also be viewed within the context of what the state and its subdivisions will raise and spend on transportation over the next 20 years. Assuming the current rates for fuel and sales taxes dedicated to transportation purposes, California will generate nearly \$220 billion in the next two decades. And, based on current plans and programs, this amount would enable California to manage congestion so it will not worsen.

By comparison, the high-speed train system's \$25 billion capital cost represents only a fraction of what will be spent in transportation, yet promises significant benefits for a much larger population.

Successfully developing a high-speed train system will also require adopting a different mind-set than that which has shaped the planning, building and operating of trains for over a half-century.

Rather than seeking to realize primarily social and political objectives that require substantial public subsidies to construct and operate, the mind-set that drives the development of the high-speed train system should focus on returning substantial financial, economic and environmental benefits for whatever public and private investments are made. Failure to apply this new mind-set will place the high-speed train system in jeopardy of needing greater public capital and requiring operating subsidies.

## **Options and Recommendations**

After two years of careful and thorough analysis, the Authority is pleased to state that building a high-speed train system is a smart investment for the people of California.

Because of the high-growth rate and urbanization in various areas of the state, the environmental phase of the high-speed train network should begin immediately in order to preserve the necessary right-of-way for track and stations. Failure to do so will increase costs substantially and delay reaping the benefits.

While the Authority has sufficient information and analyses to conclude that a high-speed train system is a smart investment and should proceed, the next step in development should be carrying out a program environmental impact report (EIR). This phase is the logical and appropriate next step for the following reasons:

- The further engineering and environmental analyses that are part of the initial environmental phase of the project will define with greater specificity the high-speed train technology, corridors and station locations included in this plan.
- The official input of federal, state and local agencies about the project (which is required during this phase) will help further hone the capital costs of the project — even though we are assured by the best technical advisors in the world that the system can be built for the \$25 billion estimate included in this plan. It is reasonable to anticipate that the federal government would become a financial partner in this project, reducing the capital needs to be borne by the California taxpayer.
- The financial plan will benefit from substantive discussions with the private sector about investing in the project. Potential investors will be most interested in how the ridership and revenue projections compare with those of other agencies and their assessment of the future. For example, the business plan assumes annual growth in intercity air and auto travel of 2.5% and 1.3%, respectively. The Federal Aviation Administration applies an annual growth rate of 3.5% for air travel, and the Federal Highway Administration applies an annual growth rate of 2.0% to highway travel. In addition, the business plan does not assume increases in airport congestion or airfare over the next 20 years over what they are today. Ridership and revenues would be substantially higher if growth rates in airfares and air and highway congestion approach or exceed those used by the above agencies. Higher revenues that result from more congestion or increased airfares would reduce the investment the people of California will need to make.

The Authority recommends that the Governor and the Legislature take the following actions to start the state toward a 21st century passenger train network worthy of California's needs, desires, and aspirations.

- Initiate a formal environmental clearance process with a state-level program environmental impact report (EIR)/federal-level Tier I environmental impact statement (EIS) on the high-speed train network described in this plan. At the conclusion of the program EIR/Tier I EIS, decision makers can re-evaluate funding options and strategies based on more detailed analyses and information. The financial commitment required to initiate this process is \$25 million over the next two years. If the project is deemed viable at the conclusion of this phase, an additional \$350 million would be required over the following three to four years to achieve full environmental clearance and achieve a 30 percent level of engineering design. The Authority, or its successor, would then have the option to entertain

proposals from the private sector to enter into a design-build contract and a franchise with the private sector to operate and maintain the system.

- Increase funding and accelerate planning and programming for intercity and commuter rail improvements that can provide enhanced, higher-speed service to Californians earlier and ultimately become part of the high-speed train network. These improvements should occur concurrent with the environmental studies and engineering work on the high-speed train network.
- Begin an aggressive statewide effort to increase federal funding for both conventional and high-speed trains in California. In addition, this effort should include working with the Federal Railroad Administration (FRA) and high-speed train manufacturers to resolve safety and compatibility issues.
- Encourage state, regional and local entities to include high-speed trains in their planning for the future.

In the following pages, the business plan summarizes the Authority's work on defining a high-speed train system, developing patronage and revenue forecasts, establishing the benefits of a high-speed train system, determining how it will integrate with other modes of travel, funding the project development and construction of the system, and gaining the input of Californians as to what they would like to see included in a high-speed train system.

